We claim:

- 1 1. A process for producing substantially pure pravastatin, the process comprising
- 2 culturing microorganisms under conditions capable of converting compactin to
- 3 prayastatin by maintaining a concentration of compactin not less than 300 μg/mL
- 4 during the process.
- 1 2. The process of claim 1, wherein the culturing of microorganisms comprises
- 2 fermentation.
- 1 3. The process of claim 2, wherein the fermentation comprises a repeated fed-batch
- 2 culture technique.
- 1 4. The process of claim 2, further comprising periodically adding quantities of
- 2 compactin during the fermentation to maintain the concentration of compactin at
- 3 not less than 300 μg/mL during the process.
- 1 5. The process of claim 4, wherein the concentration of compactin is maintained
- within the range of about 300-900 μg/mL.
- 1 6. The process of claim 4, wherein the compactin is in the form of a solution.
- 1 7. The process of claim 4, wherein the compactin comprises any soluble salt of
 - compactin.

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- 1 8. The process of claim 7, wherein the compactin solution comprises the sodium salt
- 2 of compactin.
- 1 9. The process of claim 1, wherein the microorganism belongs to the Streptomyces
- 2 genus.
- 1 10. The process of claim 9, wherein the microorganism is a Streptomyces carbophilus
- 2 strain, variant or mutant thereof.
- 11. The process of claim 10, wherein the microorganism is a Streptomyces carbophilus
- 2 strain.

1 12. The process of claim 1, wherein the conditions capable of converting compactin to

- 2 pravastatin comprise a fermentation production medium comprising glucose at a
- 3 concentration of about 15-23 (g/L), Soya bean meal at a concentration of about 25-
- 4 38 (g/L), cottonseed meal at a concentration of about 2-4 (g/L), corn steep liquor at
- a concentration of about 5-8 (g/L), sodium chloride at a concentration of about 5-6
- 6 (g/L) and calcium carbonate at a concentration of about 2-3 (g/L).
- 1 13. The process of claim 12, wherein the conditions capable of converting compactin
- 2 to pravastatin further comprise maintaining the temperature of the production
- medium at about 18 °C to about 50°C.
- 1 14. The process of claim 13, wherein the temperature is maintained at about 25 $^{\circ}\mathrm{C}$ to
- 2 about 30°C.
- 1 15. The process of claim 12, wherein the conditions capable of converting compactin
- 2 to pravastatin further comprise maintaining pH of the production medium at about
- 3 5 to about 10.
- 1 16. The process of claim 15, wherein the pH is maintained at about 6 to about 8.5.
- 1 17. The process of claim 15, wherein the pH is maintained at about 7.3 to about 8.0.
- 18. The process of claim 12, wherein the conditions capable of converting compactin
- 2 to pravastatin further comprises agitation at about 100 to about 600 rpm.
- 1 19. The process of claim 18, wherein the agitation is at about 100 to about 350 rpm.
- 1 20. The process of claim 1, wherein at least 50% w/w of compactin is converted to
- 2 pravastatin as determined by HPLC.
- 1 21. The process of claim 20, wherein the percentage conversion is at least about 65 to
- 2 about 75% w/w.
- 1 22. The process of claim 20, wherein the percentage conversion is at least about 70%
- 2 w/w.

 Substantially pure pravastatin containing not more than about 0.12% w/w of the compound of Formula III and not more than about 0.6% w/w of 3"-hydroxypravastatin of the structure of Formula IV.

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FORMULA III FORMULA IV

1 24. A pharmaceutical composition comprising substantially pure pravastatin, not more
2 than about 0.12% w/w of the compound of Formula III, not more than about 0.6%
3 w/w of 3"-hydroxy-pravastatin of the structure of Formula IV, and
4 pharmaceutically acceptable excipients.

10 FORMULA III FORMULA IV

A method of treating hypercholesterolemia comprising administering to a patient in need of treatment for hypercholesterolemia a pharmaceutical composition comprising substantially pure pravastatin, not more than about 0.12% w/w of the compound of Formula III, not more than about 0.6% w/w of 3"-hydroxy-pravastatin of the structure of Formula IV, and pharmaceutically acceptable excipients.

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FORMULA III

FORMULA IV